

Dr Edward Baker, P.Geo.

Project Scientist, Knight Piésold - Vancouver, BC

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Currently a geochemist working for Knight Piésold in Vancouver. Significant experience with a variety of programming languages and analytical techniques. Looking forward to using geoscience to solve problems that matter to our planet.

Key Skills

Geology, Petrology, Python, Fluid geochemistry, Water balance/Quality modelling, GOLDSIM, PHREEQC, Proposal and report writing, Thermodynamic modelling, Kotlin, Julia, SQL, Presenting data/Conferences, Remote-sensing/GIS, TensorFlow/Keras Git, Docker.

Projects

Mount Milligan Mine (BC)	Hydrogeology field work, packer testing, VWP installs, Geotechnical Logging, Quarterly and Annual Reporting
Josemaria Project (ARG)	Water-quality modelling, Baseline studies/analysis and reporting, GOLDSIM modelling
Gosselin Mine (ON)	Geochemical ML/ARD Characterisation, Geochemical change modelling for comparison with Côté deposit.
Environmental Dashboard (Online)	Designed and wrote code for an environmental analysis dashboard, used by the client to demonstrate environmental compliance to stakeholders, SkLearn and PHREEQC used for live analysis within the dashboard
Hydro Power Model (BC)	Python numerical model for power generation, used to optimise turbine design and determine likely power availability
Side Projects	Chlorite partitioning study for exploration around metasomatic/hydrous ore bodies, discovery of fertile fluids. Generated phase diagrams for Li/Spodumene crystallization in with hydrous melts

Employment History

Intermediate Geochemist – Knight Piésold, Vancouver, BC – Jan 2024 – Present	Automating data processing and publication; Geochemical modelling and analysis – PHREEQC/ASE; ab initio modelling for estimation of crystallographic parameters; Coded and deployed environmental data dashboard using Docker.
Geochemist – Knight Piésold, Vancouver, BC – Aug 2023 – Dec 2024	Writing applications and reporting for regulatory filings; Geochemical modelling and analysis – PHREEQC/ASE.
Postdoctoral Fellow – University of Manchester, UK - 2021 – 2023	Main project combined experimental geochemistry with numerical modelling, looking at light element behaviour in reducing conditions; Developed and funded independent research which included collaborations with national laboratories and mining companies; Coded android mobile app to automate calculations required for laboratory work; Trained and mentored research students; Significant experience with a wide range of analytical methods, including mass spectrometry and e-beam techniques.
Ph.D. - University of Oxford, UK - 2016 - 2021	Research scholarship, Planetary materials Institute, Japan Co-Founded Oxford Society of Economic Geology – Organised and Lead field trip to Sweden

Education

University of Oxford 2016 - 2021	PhD, Earth Science – Thesis Title: ‘On the Evolution of the Lunar Magma Ocean’
University of Oxford 2012 - 2016	Undergraduate Masters – MSci Earth Science - 2:1

Courses and Conferences

Exploration Tech, Vancouver 2024; BC ML/ARD conference, Vancouver 2023, 2024; iCARD, Halifax 2024; AME Roundup, Vancouver 2024; British planetary science conference, Oxford; Terrestrial planets conference, Cambridge.